INVESTMENT INSIGHTS · GLOBAL EQUITIES
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CLIMATE CHANGE AND INVESTING: "DENIAL IS NOT A RIVER IN EGYPT"

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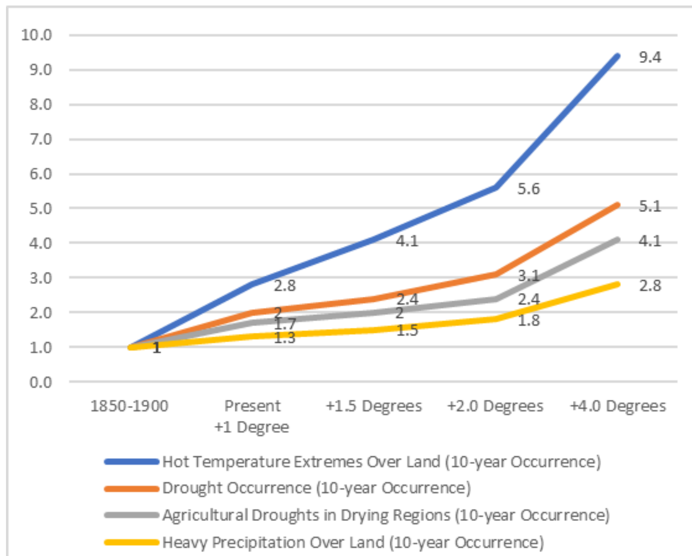
As the UN Climate Change Conference is being held in Glasgow from October 31st to November 12th (better known as COP26), we thought it would be good to share what we think are some of the more important investment implications of climate change. We base our views on key scientific findings of the International Panel on Climate Change (IPCC) report[1], the publication that will serve as a reference document for the conference.

While the IPCC report can be seen as "one more warning on warming," the sheer volume and detail of the report points to the simple fact that climate change is happening and is driven by human/economic activity.

Key scientific conclusions of the report are:

- *Climate volatility is here to stay* - Due to the volume of greenhouse gasses in the atmosphere, the most noticeable effects of global warming (extreme droughts, heatwaves, downpours, and flooding) will continue to worsen for the next 30 years, *regardless of current mitigation efforts.* Other impacts, like melting ice sheets and rising sea levels, will continue for much longer.
- *The impact will be universal* - Every region will be affected, and extreme weather events are becoming more frequent.
- *Co_2 isn't the only problem* - In addition to carbon dioxide, the world needs to focus on sustained reductions in methane emissions (largely from livestock rearing and fossil fuel production).
- *Climate tipping points can't be ruled out* - Tipping points in the Earth's climate are thresholds where a small change can dramatically alter the climate system. The IPCC highlights that "the probability of low likelihood, high impact outcomes increases with higher global warming levels" (Exhibit 1). Major tipping points could result in ice-sheet collapse or abrupt changes to ocean circulation patterns.

EXHIBIT 1: INCREASE IN OCCURRENCE OF PHYSICAL RISKS BY CLIMATE SCENARIO (PER DECADE RELATIVE TO 1850-1900)



Source: IPCC Report

INVESTMENT IMPLICATIONS OF CLIMATE CHANGE

As an asset manager and asset owner, our job is to weigh the risks and opportunities of the different investments in front of us. Climate change and other financially material ESG factors have the potential to significantly influence that trade off, especially within the scope of a long-term investment horizon. As such, we see an evolving investment environment where:

- *Valuations may become bifurcated based on climate change and ESG*. Both the need for immediate carbon reductions and the long-term trajectory of regulation makes it likely that we will see a valuation bifurcation between companies that are part of the solution or part of the problem, as well as companies that have credible short-term targets versus those with more generic long-term targets. The valuation premium is driven by the

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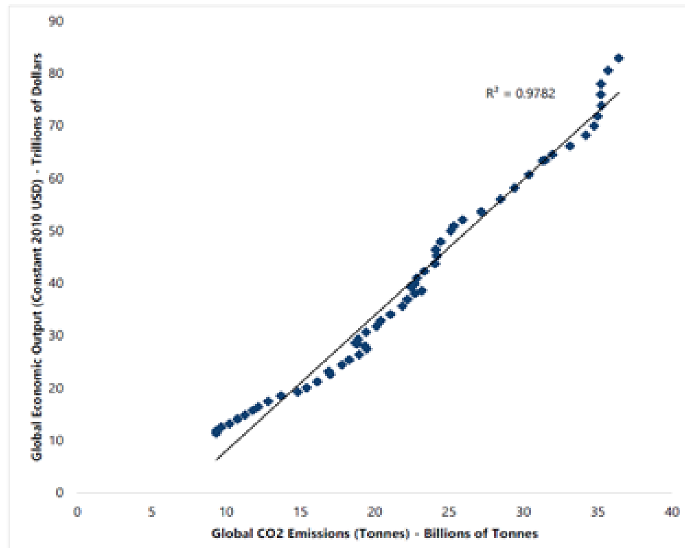
time value of money and better long-term visibility (lower risk).

- *There will be higher specific risk*. Growing physical climate risks will require more sophisticated supply chain analysis, and will lead to higher industry and company specific risks (e.g. depending on the physical climate risks of the locations of specific supply chains). Examples from the last decade include extreme cold in Texas that strained the global chemical supply chain (February 2021), historic droughts in Brazil that cut coffee production by nearly a quarter (2021), and flooding in Thailand that resulted in global shortages in auto and Hard Disk drive components (2011).
- *Non-linear risks will be met with non-linear opportunities*. Non-linear risks are associated with tipping points that result in abrupt change of the climate system. Non-linear opportunities are more likely to be associated with technological innovation and changes in regulation.
- *Beware of hope over reality*. While carbon removal strategies (like carbon capture) will be part of the solution, they are not the be-all and end-all. The sum of all individual companies objectives is basically unrealistic. "Removal" strategies may also push out carbon "reduction" strategies in certain sectors or companies. E.g. the carbon capture strategies announced by the European oil majors would require the total landmass of India.
- *The direction (mitigate vs. adapt), speed, and implementation of climate action policies will be driven by political trade-offs and priorities.* Historically, economic growth and carbon emissions have gone hand in hand (Exhibit 2). More tempered or less material-intensive growth, or an acceleration of alternative energy usage will be needed to make progress on climate change. This was painfully clear in China recently, where a lack of alternative energy in scale failed to make up for the drop in coal-generated electricity, resulting in power outages, production cutbacks, and, ultimately, lower economic growth. As economic growth in emerging markets is more carbon intensive, political tensions between developed and emerging market countries could easily intensify.

EXHIBIT 2: GLOBAL CO2 EMISSIONS AND THE SIZE OF THE GLOBAL ECONOMY



Source: World Bank, Global Carbon Project, Jeffries

While it is a valid topic of discussion whether the best course of action is to follow a strategy of climate change mitigation or a strategy of climate change adaption, it's almost impossible to deny climate change is happening. When it comes to climate change and investing, "Denial cannot be a river in Egypt."

[1] The Intergovernmental Panel on Climate Change is comprised of 194 countries that are either part of the United Nations or the World Meteorological Organization. Their latest Assessment Report on Climate Change holds 3,949 pages of analysis sourced from 14,000 scientific papers

Main Sources:

Intergovernmental Panel on Climate Change, "Climate Change 2021: The Physical Science Basis" 7 August 2021

LA Times, "The current drought is worldwide" 16 July 2021

JP Morgan, "ESG & Sustainability Research: ESG Wire" 13 August 2021

Jefferies ESG Research, "Code Red for Humanity: Five Investment Implications of IPCC Report" 8 August 2021

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